# On the AI Composer Bias in Music Appreciation: A Moderation Analysis

Ilona Valens

S5175690

Department of Psychology, University of Groningen

PSB3E-BT15: Bachelor Thesis

Group 2425_2a_28

Supervisor: dr. Wim Meerholz

Second evaluator: dr. Ben Gützkow

In collaboration with: Lena Bola Ujčič, Stijn Horsman, Thomas Römer, Maurice Seredjuk, and Hanne Ziggers.

June 26, 2025

*A thesis is an aptitude test for students. The approval of the thesis is proof that the student has sufficient research and reporting skills to graduate, but does not guarantee the quality of the research and the results of the research as such, and the thesis is therefore not necessarily suitable to be used as an academic source to refer to. If you would like to know more about the research discussed in this thesis and any publications based on it, to which you could refer, please contact the supervisor mentioned*

**Abstract**

In recent years, music composed using AI has become increasingly common. This has led to the question of how believing a song is AI-generated affects a listener's appreciation of it, and whether an AI composer bias exists. We conducted research on the effect of AI authorship information on music appreciation, with preference for lyrics as a moderating factor. We used a between subjects design consisting of three conditions: fully AI, fully human and a hybrid condition. We found that participants in the hybrid condition showed significantly lower levels of music appreciation than those in the fully human condition. We also found that participants low in preference for lyrics in both the fully AI and human condition appreciated the song significantly less compared to those in the fully human condition. Our study provides support for the AI composer bias. With the rapid development of AI and its increasing prevalence, we recommend researchers to keep investigating the AI composer bias as its effects might change. For now, we recommend artists to be careful about using AI and to not state it too explicitly when it is used to generate (parts of) a song.

*Keywords:* AI-generated music, AI composer bias, authorship information, preference for lyrics, music appreciation

# On the AI Composer Bias in Music Appreciation: A Moderation Analysis

These days, it's hard to imagine a world without Artificial Intellingence (AI). Many people use it themselves in their daily life, with the rise of software such as ChatGPT (Yu et al., 2024). The prevalence of AI and its possibilities has grown exponentially over the last few years (Orchard & Tasiemski, 2023). The concept of AI music has been around for many years, originating in the 1950s, when Pinkerton explored the early potential of machine generated music (Pinkerton, 1956). AI challenges the idea that artistic creativity is something that can only be achieved by humans (Millet et al., 2023). That's why the idea of AI art and in this case AI music might be threatening to people. Given the rise of AI music (Civit et al., 2022), we believe it is important to understand what factors affect the appreciation of AI music.

These recent years, there has been an increase in research on AI art and music (Ansani et al., 2023; Kaube & Abdel Rahman, 2024; Shank et al., 2022). Kaube and Abdel Rahman (2024) discovered that negative information about the artist can influence both the evaluation and the perception itself of a piece. Similarly, people tend to like music less when they think it is made by AI versus when they think it is made by a real person (Shank et al., 2022). This bias against AI is referred to as the *AI composer bias*. We believe that having a preference for lyrics could be an important moderator in the relationship between AI authorship information and the appreciation of a song. Music could be seen as a language used by the composer to convey a message to the listener (Athreya & Dash, 2025), and one might argue that the lyrics of a song play an important role in this. We believe that those with a high preference for lyrics have an increased AI composer bias and therefore will appreciate a song less when they think its is created by AI. Therefore, we'll be looking into the effects of authorship information on music appreciation, with the preference for lyrics as a moderating factor.

## Music Appreciation

For our study, we will be looking into *music appreciation* as our dependent variable. This refers to the extent to which people like a piece of music, but it contains more than just pleasure and reward (Chilvers et al., 2024). Thompson et al. (2023) defined music appreciation as the psychological processes behind the tendency of the listener to engage with a song. One way in which this is reflected, is when the listener attempts to interpret what the composer's intentions were when creating the song (Thompson et al., 2023). Not everyone appreciates music in the same way. Chilvers et al. (2024) showed that both the cultural background of the listener and that of the song have an effect on the level of music appreciation.

There are three primary factors that can influence music appreciation. The first one being knowledge about music, which can increase music appreciation (Hou et al., 2024). For example, knowing how a piece of music can convey emotions increases the emotional responses to music. This because the listener is more likely to catch and be affected by all the different ways emotions can be conveyed when he or she is aware of this. A second factor that can influence music appreciation are personality traits. Galvan and Omigie (2022) showed that people with a lot of curiosity tend to like music more across different genres than those who are not very curious. Thirdly, aspects within a song itself can influence its appreciation. Songs that contain sadness are enjoyed more than those that don't, as it leads to the listener being moved (Schubert, 2024). As a potential fourth factor, we also expect the artist of a song to have an influence on its listeners liking of it. More specifically, we assume that the information presented to the listener about the artist is enough to influence music appreciation, no matter whether the information is true or false.

## Authorship Information

Our independent variable is *authorship information.* This refers to the information the listener receives about the composer of a song; this information doesn't have to be true to the real composer (Shank et al., 2022).

Authorship information can influence perception of art (Kaube & Abdel Rahman, 2024) and make people notice differences that don't exist (Ansani et al., 2025). Painting made by young artists are seen as more aesthetic (Isham et al., 2010). This shows a recent trend that art made by children is appreciated more that that of famous artists, possibly because they generate more sympathy that influences perception.

Authorship information has started to become more and more relevant to the music industry. Companies in the K-pop industry are seen as money-driven with their artists seen as manufactured (Saeji, 2024). This is called idol-making (Wang, 2022), where the company has a lot of control on the authorship information presented to the listeners. Therefore, research on authorship information and authorship bias can help artists and the music industry cater the image of the artist to the listeners.

The type of authorship information received can lead to an authorship bias, in this case the AI composer bias (Shank et al., 2022). Studies have shown that a song is liked less when the listener thinks its AI-made (Shank et al., 2022). Ansani et al. (2025) tested whether the AI composer bias was present in musical performance as well, using audiovisual stimuli to mimic both a human and an AI performance. They showed that people were able to notice differences between the two identical pieces, based on the performer. When a human was shown to perform the piece, the music was considered lively and confident, whereas when an AI 'performed' the exact same piece, people reported it sounded mechanical.

There are many factors that can influence the effect of the AI composer bias. One of the factors it could depend on is the type of music. As was shown by Shank et al. (2022), AI authorship information doesn't have much of an effect when the type of music played is

electronic, whereas classical music showed to be sensitive to the AI composer bias. This could be because electronic music sounds more like what people expect AI music to sound like. This creates a congruence between the music and what people expect of the artist, in this case AI, which makes people like the music more (Belfi et al., 2021).

Regarding the effect of authorship information on music appreciation, we came up with the following hypothesis: We expect people to appreciate a song less when they are being told it is made by AI or made by a human working with AI compared to when they think it is fully composed by a human. However, we believe that there is another factor that could moderate the effect of authorship information on music appreciation, namely the extent to which people have a preference for lyrics in music.

## Preference for Lyrics

We introduce the concept *preference for lyrics*, meaning the value an individual gives to the presence of lyrics in a song. The lyrics are the verbal aspects of the song (Ho & Loo, 2023). There hasn't been a lot of research on the preference for lyrics in individuals, however research has been done on lyrical preferences. Sust et al. (2023) found that scoring high on conscientiousness (a Big Five personality trait) was linked to preferring lyrics with words about achievements.

Lyrics can play an important role in songs, affecting how people perceive the world and on the way people identify themselves (Sánchez González, 2021). Lyrics can also activate feelings of sadness and nostalgia, however these effects differ across different cultures (Barradas & Sakka, 2021). Xu et al. (2024) found that a song with lyrics that contains negative words is often considered as having more depth compared to a song with very positive lyrics.

A preference for lyrics could influence how a person views a piece of music and its composer. Lyrics can be seen as a way for the artist to communicate thoughts and feelings

with the audience, which is even more prominent when the lyrics are written in first person perspective (Simecek, 2025). This reflects a very humanlike aspects of lyrics, something we believe AI authorship information could interfere with. Therefore, we came up with the following hypothesis: we expect people with a high preference for lyrics to appreciate a song less when thinking it is fully made by AI or a human working with AI rather than fully human made; whereas we expect a weaker effect for those low in preference for lyrics.

## The Present Research

We believe our study is novel in four key ways. First of all, a lot of research looking at AI composer bias has used only human music (Ansani et al., 2025; Shank et al., 2022), most of the time containing only a short piece of music. Our study used a song that is actually made by AI, of which we let the participants listen to approximately one and a half minutes. This allows the participants to get a feel for the different aspects of our song. A second way in which our study differs from previous research is the fact that we also used vocals for our song, completely done by AI, relying on the newest technologies. This means the song used in our study will be representable of AI's current abilities. A third way in which our study is novel is the incorporation of our moderator, preference for lyrics, into the design. Fourthly, we added a hybrid condition to our study, in which people think the song is made by a combination of human and AI. This is a very relevant situation, as there is an increasing amount of composers making use of AI tools (Yuan, 2024).

## Method

### Participants & Design

We started with a total of 155 cases. In a first step, 45 cases were removed due to not completing the survey. As a criterium for this, participants had to at least reach the seriousness check at the end of our study for it to count as complete. This was primarily so we could verify for each participant whether they took part seriously or not. Most of these cases

removed in the first step had already quit the survey before getting to the manipulation. Only 12 reached the manipulation and only 1 answered questions regarding to our dependent variable. This means there were almost no participants that quit halfway through our study; nearly all of them quit at the start. This suggests that our methodology wasn't the cause of the many cases that had to be removed. As a second step, we checked whether the remaining participants passed the seriousness check. No participants were removed in this step, as all said they had taken part seriously. As a third step, we removed 27 more participants because they failed to answer our attention check correctly. Additionally, 3 more participants were removed because they indicated that they did not want their data to be included after they had been debriefed. This left us with 80 final participants in our dataset. Out of those 80 participants, 46 were female and 34 were male, with an age range between 18 and 75 ($M$ = 31.41, $SD$ = 14.49) . Our participants were selected via a convenience sample. Our survey was spread via the researchers' (extended) personal networks as well as via WhatsApp group chats and other social media platforms.

Our study consisted of a between subjects design with one independent variable, authorship information, consisting of three levels (fully human, hybrid, and fully AI). Participants were randomly assigned to one of these conditions. Our dependent variable was music appreciation. Our moderator was the preference for lyrics. This study was part of a bigger project which included additional variables that will not be discussed in detail here. For a list of all the variables measured, see Table 1 in Appendix A.

**Materials & Procedure**

Our study was an online Qualtrics survey. As a cover story, we told participants we were investigating how humans experienced and evaluated music compared to how AI did this. We chose this cover story because our survey contained questions about AI and we did not want to make the participants in the human condition suspect anything about the real

purpose of our study. We were afraid that the participants in the human condition would be suspicious of the song being AI-generated and therefore would not be affected by our manipulation.

***Preference for Lyrics***

After participants provided their informed consent, we measured our moderator, the preference for lyrics, using a scale of 8 items on a 7-point Likert Scale ($\alpha$ = .80). Examples of items were: '*I remember songs by their lyrics.*' and '*I tend to listen to songs that have lyrics with a deeper meaning.*' This scale was put together based on the work of Sánchez González (2021) and our own input. We removed some items from the scale that did not fit our research questions (e.g. items focused on personality traits) and added our own items (e.g. '*Lyrics play a big role in determining a song's quality.*') to make sure we felt all aspects of having a 'preference for lyrics' were covered.

***Authorship Information Manipulation***

Following this, participants were exposed to the experimental manipulation. In our study, we used our own AI-generated song, made specifically for the purpose of this study: the lyrics were created using ChatGPT, and the music was produced using the platform SUNO. Depending on the assigned condition, participants were presented with one of three different types of authorship information as part of the manipulation. Before listening to the song, a piece of text was shown to the participants. For the fully human condition, participants were told the song was entirely composed by a singer-songwriter from the UK called Victoria Bellamy. The participants in the hybrid condition were told the song was created by Victoria Bellamy, a singer-songwriter from the UK who uses AI to make the music and writes the lyrics herself. The final condition, the fully AI condition, was told that the song was created by a virtual AI musician, named Victoria Bellamy, created by the AI platform Suno. To see the exact instructions we used in each condition, see Appendix B. We phrased our

manipulation this way, to ensure that factors such as the name of the artist or the length of the instructions wouldn't affect the evaluation of our music. After reading the text, participants listened to the song for a minimum of 90 seconds. The song was in the pop genre, which we selected because it's broadly accessible and unlikely to cause strong biases based on individual music preferences. We required at least 90 seconds of listening time to ensure that participants had enough exposure to consider various aspects of the song before forming an opinion. After this period, a "Continue" button would appear, allowing them to proceed.

### *Music Appreciation*

After listening to the song, the participants received statements to measure our dependent variable, music appreciation. The scale used for this consisted of two items ($\alpha$ = .91). The two items were: *'I liked the song I just listened to'* and *'I am interested in listening to this song again.'* Participants answered whether they agreed with these statements on a 7-point Likert Scale.

### *Attention Check*

At the end of our survey, we included an attention check. Participants were asked who the music they heard was created by, using a multiple-choice question with three answer options, each corresponding with one of the conditions. This to ensure that the participants had read the text with authorship information well. We also included questions at the end of the survey to measure the demographics. After these questions, participants were debriefed about the true purpose of our study. Following this, participants were given the option to have their data removed from the study. We also included a seriousness check in our study.

## Results

We used the software SPSS and PROCESS (Hayes, 2013). Before starting our analysis, all assumptions were checked and met.

We analysed our data to test our two hypotheses. We expected people to appreciate a

song less when they think it was composed by AI or a human working with AI compared to when they think it fully composed by human (H1). And we expected people with a high preference for lyrics to appreciate music less when they think it is fully composed by AI or a human working with AI rather than entirely created by a human; whereas we expected only a weak effect for those low in preference for lyrics (H2). We ran an analysis with authorship information as the independent variable, music appreciation as the dependent variable, and importance of lyrics as the moderator.

In line with our first hypothesis, we found that participants in the hybrid ($M$ = 2.27, SD = 1.20) and fully AI ($M$ = 2.58, $SD$ = 1.47) conditions appreciated the song less than those in the fully human ($M$ = 3.34, $SD$ = 1.68) condition. However, this effect was only significant for the hybrid ($t$ (74) = -2.76, $p$ = .01) condition and not for the fully AI ($t$ (74) = -1.57, $p$ = .12) condition (even though the pattern was the same).

The interaction between the fully AI manipulation and preference for lyrics was significant, $t$ (74) = 2.25, $p$ = .03. Contrary to our second hypothesis, participants who scored low on preference for lyrics in the fully AI condition appreciated the song less compared to the fully human condition ($t$ (74) = -2.86, $p$ = .01), whereas those who scored high on preference for lyrics didn't show such a difference ($t$ (74) = .58, $p$ = .56).

The same effect, again not in line with our predictions, was found for the participants in the hybrid condition Those with a low preference for lyrics appreciated the song significantly less compared to those in the fully human condition ($t$ (74) = -2.78, $p$ = .01), whereas those with a high preference for lyrics did not show a significant difference from those in the fully human condition ($t$ (74) = -.95, $p$ = .35). There was also no significant interaction effect found between the hybrid condition and preference for lyrics, $t$ (74) = 1.30, $p$ = .20.

There was no significant main effect found of the preference for lyrics on the appreciation of our song ($t$ (74) = -1.29, $p$ = .20).

## Discussion

In our study, we investigated two hypotheses. Firstly, we expected people to appreciate a song less when they are told it is fully composed by AI or composed by a human working with AI, compared to when they are told it is entirely composed by a human. Secondly, we expected people with a high preference for lyrics to like a song less when they think it is composed fully by AI or a human working with AI, compared to those who think it is fully composed by a human; whereas we expected a weaker effect for people low in preference for lyrics. In line with our first hypothesis, we found that those in the hybrid did indeed appreciate our song less than those in the fully human condition. A similar trend to that of the hybrid condition was observed for the fully AI condition, though this effect was not statistically significant. Contrary to our second hypothesis, we found that those in the fully AI and hybrid conditions with a low preference for lyrics appreciated the song significantly less than those in the human condition. No effect was found for those high in preference for lyrics.

We found that those in the hybrid condition appreciated our song significantly less than those in the human condition, with a similar but non-significant effect for the AI condition. This could be caused by the AI bias, for which support was also found by Shank et al. (2022). We, however, were able to reproduce this effect using a piece of AI music, whereas both Ansani et al. (2025) and Shank et al. (2022) used a song composed by humans. It could be that because of our small sample size (N = 80), statistical significance was not reached for the AI condition compared to the human condition, as the observed effect was in the direction we predicted. Another explanation for the effect not being as strong as we expected, is the genericness of our song. On average, participants had low appreciation for our song (M = 2.66), regardless of the condition they were in. This could have lead to the

differences between the condition being smaller than if we had used a different type of song, such as a classical piece, which is shown to be more sensitive to the AI composer bias (Shank et al., 2022), or an indie song. However, we chose to go with a generic pop song to make sure the genre wouldn't polarise our participants into a group who very disliked the genre and a group that loved the genre, making it hard to detect effects.

Those low in preference for lyrics in the AI condition and hybrid condition appreciated our song significantly less than those in the human condition. We came up with two possible explanations for why those with a low preference for lyrics in the full AI and hybrid conditions liked our song less than those in the human condition. First of all, maybe those with a low preference for lyrics care more about the music itself, and see AI as more incapable of making music than of writing a text, as most people are experienced with using AI for text generation (Yu et al., 2024). A second explanation could be that those with a low preference for lyrics paid more attention to the instruments and therefore noticed certain parts that sounded AI-generated more than those with a high preference for lyrics, who maybe focused more on the meaning of the lyrics itself. However, this effect was only found when comparing the AI condition to the human condition.

Maybe thinking the song was made by AI allowed those with a low preference for lyrics to easier notice the AI sounding parts in the music, as they might have focused less on the lyrics and more on the music itself. And as Ansani et al. (2025) showed, authorship information can lead to people noticing things that don't actually exist. This could mean that those with a low preference for lyrics heard AI sounding parts in the song that in reality would be very hard to distinguish from human-made music, if it is true that those with a low preference for lyrics focused more on the music than those high in preference for lyrics.

Our study has shown that the appreciation of a piece of music isn't solely based on the content of the music; cognitive and social constructs, such as authorship information, seem to be a big factor in music appreciation. As AI gets more accepted, we think it could be possible that the influence of the AI composer bias on music appreciation will change. It is shown that an increase in knowledge and experience with AI can lead to more positive attitudes towards AI (Daly et al., 2025). However, as AI could be seen as more capable of writing lyrics than composing music, the acceptance of AI might be domain-specific (Graichen et al., 2023).

**Limitations**

We came up with three limitations to our study that could be improved upon in future research. Firstly, we used a convenience sample for our study, which reduces the generalisability of our results to the full population. We assume a large part of our sample were university students or at least affiliated with them, which could have lead to our sample being more experienced with AI than the general population. This could be solved by making use of a random sample. However, we had limited resources and were not able to achieve such a sample.

Secondly, we used only one song in our study. This means the results are not applicable to music in general. The AI bias has different effects of different genres (Shank et al., 2022). This could be solved by using smaller fragments of multiple song across multiple genres, keeping in mind the participants' attention span. We chose not to do this, as we wanted our participants to listen to a longer portion of our song, as that gave them the opportunity to evaluate the different aspects of a song. We believed this best simulates a real life scenario were someone hears a new song.

Thirdly, the participants listened to our song through an online survey in an uncontrolled listening environment. We gave them the instructions to use headphones and sit in a quiet environment, however we cannot ensure that every participant did this. And there

might have been other factors in their environment that could have influenced their listening experience, such as a beam of sunlight coming through the window. This could be solved by letting participants listen to the song in a laboratory. We didn't think that this would be a very realistic listening environment and chose not to use it for this reason.

**Future Research**

We thought of three aspects of our study future research can further investigate. Firstly, research can be done on the different ways the authorship information can be framed. For example, it can be investigated whether, when mentioning the use of AI, giving the AI a specific name would reduce the authorship bias compared to just calling it 'AI'. This would benefit artists by showing them what type of framing would lead to the most positive evaluations of their music. This could be quite useful as more and more artists are making use of AI (Yuan, 2024) and a combination of human and AI music seems to be most profitable (Li, 2025).

Secondly, we only measured the appreciation of the song after listening to it once, which may have been the first encounter with AI music for some participants. It could be looked into whether repeated exposure to music with AI authorship information changes the appreciation over time. As we expect AI usage to increase rapidly, this could predict the changes in acceptance of AI music in the population over time.

Thirdly, the preference for lyrics needs to be further investigated. For example, would the same AI music with different types of lyrics influence the appreciation of a song more for those with a high preference compared to those with a low preference for lyrics? And do people with a high preference for lyrics have different expectations of AI's ability to write lyrics than those with a low preference for lyrics? Would other preferences, such as one for melody or rhythm, produce similar effects?

**Conclusion**

Our results provide support for the idea that music appreciation is based not only on the content of a song, but also on who the listener believes the composer is. We found evidence of an AI composer bias, especially among those with a low preference for lyrics, as these participants appreciated the song significantly less than those who thought it was composed by a real person. These findings highlight the importance of the authorship information provided to the listener, particularly as the prevalence of AI-generated music increases.

## References

Ansani, A., Koehler, F., Giombini, L., Hämäläinen, M., Meng, C., Marini, M., & Saarikallio, S. (2025). AI Performer Bias: Listeners Like Music Less When They Think it was Performed by an AI. *Empirical Studies of the Arts*. https://doi.org/10.1177/02762374241308807

Athreya, S. H., & Dash, P. (2025). Suno AI and musings of copyright: An enquiry into fair learning and infringement analysis of generative AI creation. The Journal of World Intellectual Property. https://doi.org/10.1111/jwip.12358

Barradas, G. T., & Sakka, L. S. (2021). When words matter: A cross-cultural perspective on lyrics and their relationship to musical emotions. *Psychology of Music*, *50*(2), 650–669. https://doi.org/10.1177/03057356211013390

Belfi, A. M., Samson, D. W., Crane, J., & Schmidt, N. L. (2021). Aesthetic judgments of live and recorded music: effects of congruence between musical artist and piece. *Frontiers in Psychology, 12*. https://doi.org/10.3389/fpsyg.2021.618025

Chilvers, A., Quan, Y., Olsen, K. N., & Thompson, W. F. (2023). The effects of cultural source sensitivity on music appreciation. Psychology of Music, 52(3), 284–304. https://doi.org/10.1177/03057356231201846

Civit, M., Civit-Masot, J., Cuadrado, F., & Escalona, M. J. (2022). A systematic review of artificial intelligence-based music generation: Scope, applications, and future trends. *Expert Systems With Applications*, *209*, 118190. https://doi.org/10.1016/j.eswa.2022.118190

Daly, S. J., Wiewiora, A., & Hearn, G. (2025). Shifting attitudes and trust in AI: Influences on organizational AI adoption. *Technological Forecasting and Social Change*, *215*, 124108. https://doi.org/10.1016/j.techfore.2025.124108

Galvan, J., & Omigie, D. (2022). Individual differences in the expression and experience of curiosity are reflected in patterns of music preferences and appreciation. Psychomusicology: Music, Mind, and Brain, 32(3–4), 59–75. https://doi.org/10.1037/pmu0000289

Graichen, L., Graichen, M. & Keckeis, J. (2023). Acceptance of AI - Is It Domain- Specific?.

Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. New York: Guilford Press.

Ho, H. Y., & Loo, F. Y. (2023). A theoretical paradigm proposal of music arousal and emotional valence interrelations with tempo, preference, familiarity, and presence of lyrics. *New Ideas in Psychology*, *71*, 101033. https://doi.org/10.1016/j.newideapsych.2023.101033

Hou, Y., Song, B., Zhu, Y., Yu, L., & Hu, Y. (2024). Acquiring musical knowledge increases music liking: Evidence from a neurophysiological study. PsyCh Journal. https://doi.org/10.1002/pchj.791

Isham, E. A., Ekstrom, A. D., & Banks, W. P. (2010). Effects of youth authorship on the appraisal of paintings. *Psychology of Aesthetics, Creativity, and the Arts*, *4*(4), 235–246. https://doi.org/10.1037/a0019308

Kaube, H., & Abdel Rahman, R. (2024). Art perception is affected by negative knowledge about famous and unknown artists. *Scientific Reports*, *14*(1). https://doi.org/10.1038/s41598-024-58697-1

Li, S. (2025). The impact of AI-driven music production software on the economics of the music industry. *Information Development*. https://doi.org/10.1177/02666669241312170

Millet, K., Buehler, F., Du, G., & Kokkoris, M. D. (2023). Defending humankind: Anthropocentric bias in the appreciation of AI art. *Computers in Human Behavior*, *143*, 107707. https://doi.org/10.1016/j.chb.2023.107707

Orchard, T., & Tasiemski, L. (2023). The rise of generative AI and possible effects on the economy. *Economics and Business Review/˜ the œPoznań University of Economics Review*, *9*(2). https://doi.org/10.18559/ebr.2023.2.732

Pinkerton, R. C. (1956). Information theory and melody. *Scientific American*, *194*(2), 77-86. https://www.jstor.org/stable/10.2307/26171737

Saeji, C. T. (2024). Making icons: the rise of the K-pop adjacent industries. *Inter-Asia Cultural Studies*, *25*(6), 874–895. https://doi-org.proxy-ub.rug.nl/10.1080/14649373.2024.2365594

Sánchez González, M. G. (2021). The importance of song lyrics in perceptions and the sense of identity of young people. *RES : Revista De Educación Social*, *32*, 413–423. https://dehesa.unex.es/handle/10662/12435

Schubert, E. (2024). Liking music with and without sadness: Testing the direct effect hypothesis of pleasurable negative emotion. PLoS ONE, 19(4). https://doi.org/10.1371/journal.pone.0299115

Shank, D. B., Stefanik, C., Stuhlsatz, C., Kacirek, K., & Belfi, A. M. (2022). AI composer bias: Listeners like music less when they think it was composed by an AI. *Journal of Experimental Psychology Applied*, *29*(3), 676–692. https://doi.org/10.1037/xap0000447

Sust, L., Stachl, C., Kudchadker, G., Bühner, M., & Schoedel, R. (2023). Personality computing with naturalistic music listening behavior: comparing audio and lyrics preferences. *Collabra Psychology*, *9*(1). https://doi.org/10.1525/collabra.75214

Thompson, W. F., Bullot, N. J., & Margulis, E. H. (2022). The psychological basis of music

appreciation: Structure, self, source. Psychological Review, 130(1), 260–284. https://doi.org/10.1037/rev0000364

Wang, Z. (2022). Research on Korean Idol-Making Industry Based on Culture Industry Theory. In *Advances in Social Science, Education and Humanities Research/Advances in social science, education and humanities research* (pp. 3365–3372). https://doi.org/10.2991/978-2-494069-31-2_395

Xu, L., Xu, B., Sun, Z., & Li, H. (2024). Associations between lyric and musical depth in Chinese songs: Evidence from computational modeling. *PsyCh Journal*. https://doi.org/10.1002/pchj.785

Yu, C., Yan, J., & Cai, N. (2024). ChatGPT in higher education: factors influencing ChatGPT user satisfaction and continued use intention. Frontiers in Education, 9. https://doi.org/10.3389/feduc.2024.1354929

Yuan, N. (2024). Does AI-assisted creation of polyphonic music increase academic motivation? The DeepBach graphical model and its use in music education. Journal of Computer Assisted Learning, 40(4), 1365–1372. https://doi.org/10.1111/jcal.12957

# Appendix A

**Table 1**

*All Variables Measured in the Full Study*

| Independent Variable | Moderators | Dependent Variables |
|---|---|---|
| Authorship Information | Preference for Lyrics | Music Appreciation |
| | AI Bias | Emotional Affect |
| | Musical Expertise | Perceived Creativity |
| | Active Musical Engagement | Perceived Originality |
| | Openness to Experience | Emotional Affect |
| | Openness to Experience | Music Evaluation |

## Appendix B

**Fully Human Condition**

The song you are about to hear is performed by Victoria Bellamy, a singer-songwriter from the UK who writes and composes her own songs. The lyrics, composition, and production of this song were entirely done by herself.

**Hybrid Condition**

The song you are about to hear is performed by Victoria Bellamy, a singer-songwriter from the UK who collaborates with AI tools in her creative process. The lyrics of this song were written by Victoria, while the composition and production were generated by artificial intelligence at her direction.

**Fully AI Condition**

The song you are about to hear is performed by Victoria Bellamy, a virtual AI musician created entirely by the AI platform Suno. The lyrics, composition, and production of this song were generated by artificial intelligence without human intervention.